

# Compact wet processing.

Minimum footprint makes the most of your cleanroom space

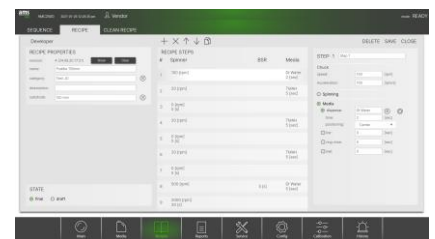
Our extremely compact and fully automated amcoss amc 500 spinner is optimized for flexible single-wafer wet processes and thus, perfectly complements our amc series of single-wafer-process tools. With its substrate size range between 2" and 300 mm (9" square), amc500 offers very flexible application possibilities in cleaning, lift-off and etching of wafers and masks. Our new, unique solutions for precise media temperature control and recycling, and therefore saving of etchants, support our customers by enabling precise processes and, at the same time, reducing costs as well as the impact on the environment.



## Beneficial highlights\_

- // **New chemicals-temperature control:** eliminates the need for pre-dispense before etching. Inadvertent mixing of chemicals almost becomes impossible.
- // **Proven amc key features:** amc500 stands out among all other amc models due to all proven technical features and its modern, user-friendly machine design. Through-the-wall installation is possible, as well as flexible machine adjustments and easy maintenance.
- // **Safe:** the equipment is designed in accordance with the newest safety regulations. A separate enclosure of the process area made of resistant material extends the safety features.
- // **Space saving:** amc500 stands out due to its minimal outer dimensions of only 800 x 1215 mm. Even so, up to 3 vessels of chemicals can be stored, tempered, and reused within the system-housing at the same time.
- // **Full process control:** each selected process is managed by the relevant module of our comfortable amcoss amc PILOT software complying with Semi-standard E95-1101.

**amc**  
500



## Technical details\_

Wafer diameters: 2" up to 300 mm or up to 9 x 9"

Up to 2 I/O stations for 2" to 200 mm open cassettes or 300 mm FOUP  
Max. 3 integrated individual chemical supply systems (more possible in external media unit)

1 two-link robot handler with single end effector for low contact handling  
Outer dimensions L x W: 1215 x 600 mm



// Pick & place robot for wafer handling with slot scanner

## Wet-process modules with multiple options\_

### amc etching module

- // Etching of wafers and masks
- // Various etching processes as standard solutions available
- // Precise media tempering solution and control

### amc cleaning module

- // Cleaning of wafer frontside, backside and edge bevel
- // Various cleaning methods as standard solutions available
- // Large area megasonic

### amc lift-off module

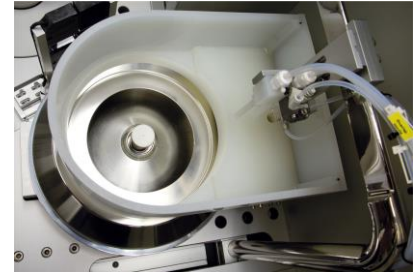
- // High-pressure Lift-off
- // Unique Lift-off process with large area megasonic
- // High- or middle-pressure cleaning with DIW or solvents
- // Special reclaim solution for minimal media consumption
- // Easy recycling of lifted metals
- // Programmable wafer backside, topside and bowl rinse

### amc media unit

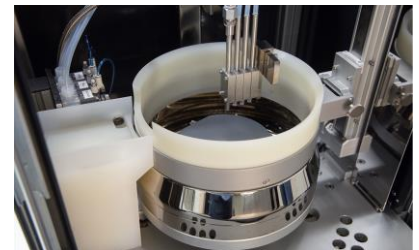
- // External unit for the storage of additional media vessels (supplementary to storage of 3 vessels inside the tool housing)
- // Reclaim, tempering and mixing is possible
- // Ready for bulk filling via fab supply

### Optional configurations

- // Media reclaim
- // Concentration monitoring
- // Filter fan unit with antistatic discharge system
- // Optical endpoint detection



// Cleaning module



// Lift-off module for a large variety of lift-off techniques

## amc500 – new dimensions in chrome etching

One possible application of **amc 500** is etching of a chrome layer on a glass substrate which is a standard process step, e.g., in the fabrication of photomasks. During this process, the substrate is sprayed or rinsed with a suitable etching chemical. After only a brief contact with the chrome layer, the etchant – typically an expensive mixture containing valuable components like the rare earth metal Cerium – is being drained. Therefore, only a small fraction of the etchant is being used, while a major part of it is inefficiently going down

**amcoss** GmbH and FIMA-Chem GmbH have jointly developed a turnkey solution for chrome etching. While FIMA-Chem supplies the spiking chemicals, **amcoss** has engineered and integrated the appropriate hardware into the **amc 500**. This represents a perfect cooperation of two innovative companies supporting our sustainability concept, environment protection and reduction of costs.

Using a novel technique, we can recycle the etchant on the tool which can then directly be re-used to process another substrate. Highly concentrated additives are employed to replenish the used-up etchant thus preparing it for another run. So, the etching chemical is used at maximum efficiency, saving a significant amount of etchant costs.

### Benefits\_

- // Significant decrease of processing costs
- // Vastly reduced impact on the environment – reduced use of chemicals and less waste

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WET PROCESSES